

REMARKS/ARGUMENTS

The Final Office Action of July 30, 2009 has been carefully reviewed and these remarks are responsive thereto. Claims 1-3, 7, 8 10-13, 15, 19-24, and 27 have been amended, claims 26, 28, and 29 have been canceled, and new claim 30-32 have been added. Claims 1-16 and 19-25, 27, and 30-32 remain pending in this application. Reconsideration and allowance of the instant application are respectfully requested.

Personal Interview

Applicants wish to thank Examiner Sheleheda for the courtesies extended to Applicants' representatives during the personal interview on November 20, 2009. During the interview Examiner Sheleheda and Applicant's representative discussed the rejections and the claim language and whether the combinations of references taught all of the claim limitations. No specific agreement was reached.

Rejections Under 35 U.S.C. § 103

The claims are rejected under 35 U.S.C. § 103 as follows:

- claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,410,326, hereinafter Goldstein, in view of U.S. Pat. No. 4,513,315, hereinafter Dekker, in view of U.S. Pat. No. 5,192,999, hereinafter Graczyk;
 - claims 8-16 and 19-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,477,262, hereinafter Banker, in view of U.S. Pat. No. 5,539,871, hereinafter Gibson, in view of Graczyk, and in further view of Dekker;
 - claims 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Banker, in view of Graczyk, and in further view of Dekker;
 - claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Banker, in view of Graczyk, in view of Dekker, and in further view Gibson.
- Applicant respectfully traverses these rejections;

- claim 26 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Goldstein, in view of Graczyk, in view of Dekker, and in further view of Baji;
- claim 27 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Banker, in view of Graczyk, in view of Dekker, in view of Gibson, and in further view of Baji; and
- claims 28 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Banker, in view of Graczyk, in view of Dekker, and in further view of U.S. Pat. No. 5,027,400, hereinafter Baji.

Applicants respectfully traverse these rejections. A rejection on obviousness grounds must account for all limitations, and the rejection must be supported by some articulated reasoning with a rational underpinning – it must make sense. See, e.g., MPEP 2143.03 (All Claim Limitations Must Be Considered); and KSR Int'l v. Teleflex, Inc., 550 US 398, 82 USPQ2d 1385, 1396 (2007). The Office Action's alleged combinations omit claim features, and lack the required rational underpinning.

Claims 1-7 and 26

Amended claim 1 recites:

A terminal comprising:
an interface configured to receive a single signal comprising a composite data stream;
program reception circuitry configured to extract and present audiovisual programs received in the composite data stream;
a hardware upgrade port configured to receive upgrade circuitry that provides simultaneous access to audio programs received in the composite data stream, wherein a presentation of the audio programs by the upgrade circuitry is independent from the presentation of the audiovisual programs;
a processor; and
memory storing computer readable instructions, that when executed by the processor, cause the terminal to generate an electronic program guide for controlling display of content on a video screen, the guide comprising a plurality of menus.

(Underscore added)

The Office Action's combination of Goldstein, Dekker and Graczyk fails to disclose every feature of amended claim 1. For example claim 1 recites, "a hardware upgrade port configured to receive upgrade circuitry that provides simultaneous access to audio programs received in the composite data stream." For this feature the Office relies on a combination of Graczyk and Dekker, conceding that Goldstein fails disclose this feature. Applicants respectfully submit that, even if Dekker and Graczyk disclosed all of the features for which each is cited, which Applicants do not concede, this combination fails disclose every feature of claim 1.

Specifically, Graczyk is relied upon for disclosing the claim 1 feature of a "hardware upgrade port ... that provides simultaneous access to audio programs." The Office cites in Graczyk a personal computer system with a television tuner card for receiving television signals from a cable connection and a separate AM/FM tuner card (the alleged "hardware upgrade port") for receiving audio signals through a separate airwave antenna. See OA, page 3 line 21 to page 4 line 10; Graczyk, Figures 1, 4, 42, and 43 , col. 9 lines 41-49, col. 10 line 33 to col. 11 line 43, col. 32 lines 47-65. For the claim 1 feature of "a composite data stream" which includes both "audiovisual programs" and "audio programs," the Office Action cites in Dekker a group of separately modulated audio signals and television signals broadcast together in a distribution network.. See OA, page 4 lines 11-19; Dekker, col. 5, lines 7-53, col. 6 lines 8-15. The Office Action further cites an audio receiver in Dekker connected to the distribution network for accessing one of the modulated audio signals. See Id.

Thus, Graczyk discloses receiving television signals and audio signals in one integrated system, but from two different sources (i.e. cable, and airwaves), and Dekker discloses a single system which receives an alleged composite data stream with multiple signals, but accesses only one of those signals at a time. The combination of Dekker and Graczyk does not disclose one system that receives and accesses both "audiovisual programs" and "audio programs" from the same "composite data stream," using two different sets of hardware, "program reception circuitry" and "a hardware upgrade port" respectively for the accessing as recited in claim 1. The alleged device would, at most, provide processing of two different signals from two different sources respectively. One of the sources would have multiple digitally modulated signals from a distribution network, as in Dekker, with the device tuning to one of the signals, and the other source

having over the air analog modulated AM/FM signals as in Graczyk. None of the references teach modifying and combining the references in the manner alleged by Office action. For example, none of the references teach using the AM/FM tuner card in Graczyk (the alleged hardware upgrade), to receive an audio program from the same signal as an audiovisual program. Accordingly, claim 1 is allowable for at least this reason.

The alleged combination further does not disclose the claim 1 feature of “a single signal comprising a composite data stream; … [with] audiovisual programs received in the composite data stream; … [and] audio programs received in the composite data stream.” As discussed above, Dekker is relied upon for this feature. Dekker, referring to the system in Figure 1, merely discloses a headend:

- 1) receiving a time division multiplex signal having n different digital audio signals S_1 to S_n , each having a sequence of bit values (Dekker, col. 5, lines 7-17);
- 2) demultiplexing the digital audio signals S_1 to S_n (Dekker, col. 5 lines 18-27);
- 3) performing error correction of S_1 to S_n to produce n parallel outputs O_1-O_n (Dekker, col. 5 lines 28-44);
- 4) re-modulating the n parallel outputs O_1-O_n onto n separate audio carrier signals F_1-F_n (Dekker, col. 5 lines 45-53); and
- 5) distributing the n separate audio carrier signals F_1-F_n having different frequencies together with TV signals onto distribution network 4 (Dekker, col. 6 lines 8-15).

Notably, Dekker never discloses that the TV signals and the audio signals, anywhere along the distribution path illustrated in Figure 1, are in a composite data stream comprised in “a single signal” as recited in claim 1.

At the input of the headend, Dekker discloses that the audio signals are in a time-division multiplex signal, but Dekker does not disclose that the time-division multiplex signal includes TV signals (Dekker, col. 5 lines 7-17). At the output of the headend, the distribution network of Dekker carries several TV signals and digital audio signals (Dekker, Abstract, col. 1 lines 10-11) distributed in parallel at different frequencies (Dekker, Figure 4, col. 6 lines 8-30). Several different signals modulated at different frequencies are not a “signal comprising a composite data stream.” Claim 1

has been amended to recite a “single signal” to make this distinction clear. Accordingly, claim 1 is allowable for this further reason.

Claims 2-7 depend on claim 1 and are, thus, allowable for at least the same reasons given above concerning claim 1 and in further view of their specific recitations.

Claims 8-16, 19-21, and 27

Independent claim 8 is rejected as obvious over the combination of Banker, Gibson, Graczyk, and Dekker. The Office Action, on pages 12-14, applies Graczyk and Dekker in nearly an identical manner to claim 8 as the Office Action applies Graczyk and Dekker to claim 1. For all the reasons discussed above regarding the shortcomings of Graczyk and Dekker as applied to claim 1, claim 8 is also distinguishable.

Dependent claims 9-16, 19-21, and 27 depend on claim 8 and are, thus, allowable for at least the same reasons given regarding claim 8 and in further view of each dependent claim’s specific recitations.

Claims 22, 23 and

Claims 22 and 23 are rejected as obvious over the combination of Banker, Graczyk, and Dekker. The Office Action, on pages 8-10 applies Graczyk and Dekker in nearly an identical manner to claims 22, and 23 as the Office Action applies Graczyk and Dekker to claim 1. Claims 22 and 23 are similarly allowable as claim 1 in that the combination of Dekker and Graczyk does not disclose (as discussed above) receiving and accessing both “audiovisual programs” and “audio programs” from the same “composite data stream,” which is received at one terminal as recited in claims 22 and 23. The alleged combination would, at most, provide processing of two different signals from two different sources respectively. One of the sources would have multiple separate digitally modulated signals in a distribution network, as in Dekker, and the other source would have airwave analog modulated AM/FM signals as in Graczyk.

Further, claim 22 has been amended to recite the feature of “a hardware upgrade port configured to interface to upgrade circuitry external to the terminal” (underscore added); and claim 23 has been amended to recite the feature of “wherein the presentation of the audio

program is remote and independent from, and uncorrelated to, the presentation of the audiovisual program" (underscore added). Graczyk, which is relied on for the upgrade circuitry, discloses integrating the television circuit card and audio circuit card into a single chassis of a personal computer, and advocates the need for, and technical advantage of, a single chassis integrated system. See Graczyk, Figures 41-48, col. 1 line 61 to col. 2 line 7, col. 2 lines 16-26, col. 2 lines 38-66, col. 32 lines 47-65. Thus, Graczyk fails to disclose the "external" and "remote" features of claims 22 and 23 respectively, and indeed, teaches away from such features. Accordingly, claims 22 and 23 are allowable for this further reason.

Dependent claims 24 and 25 depend on one of claims 22 and 23 and are, thus, allowable for at least the same reasons given concerning their respective base claims and in further view of each dependent claim's specific recitations.

Support for new claims and claim amendments

New claims 30-32 have been added. The new claims and the amendments to independent claims 22 and 23 are supported by Applicants' specification as filed in Figures 8b, 9a, and 9b and on page 34 line 30 to page 35 line 11, and page 36 lines 7-12. Support for the amendments to claims 1 and 8 is outlined below. No new matter has been added.

The amended claims 1 and 8 feature of a "a single signal comprising a composite data stream; ... [with] audiovisual programs received in the composite data stream; ... [and] audio programs received in the composite data stream" (underscore added) is supported by Applicant's specification and figures, at least, as follows. Applicants specification discloses:

The delivery system employs an in-home decompression capability employing a decompressor housed within a set-top terminal in each subscriber's home. The decompressor remains transparent from the subscriber's point of view and allows any of the compressed signals to be demultiplexed and individually extracted from the composite data stream and then individually decompressed upon selection of a corresponding program by the subscriber.

(page 5 lines 21-26; underscore added);

These external signals are received and packaged along with programming that is stored at the Operations Center 202 (not shown here).

Examples of external program sources 204 shown in Figure 1 are: Sporting events, children's programs, documentaries, Any source that can provide either audio or video or both may be utilized to provide programming to the Operations Center 202.

After packaging, the packaged television program signal is prepared for satellite transmission 206 and sent from the Operations Center 202 to the cable headend 208 via satellite transmission 206. Depending on the specific embodiment, the television program signal may need to be compressed, combined/multiplexed, encoded, mapped, modulated, upconverted and amplified.

(page 10 lines 23 to page 11 line 5; underscore added);

The cable headend 208 receives the digitally compressed and multiplexed signal from the satellite 206 and processes the signal for further distribution to the subscriber homes.

(page 12 lines 13-15.);

Signals received by the cable headend 208 must be decompressed before transmission from headend to subscriber location only when the compression algorithm used for the cable system differs from the one used for satellite transmission 206.

(page 13 lines 13-15; underscore added);

Once the television programs have been packaged and a program control information signal is generated to describe the various categories and programs available, the packaged programs are then digitized, compressed, and combined with the program control information signal. Upon the signal's departure from the Operations Center 202 the breakdown into categories is insignificant and the signal is treated like any other digitally compressed signal.

Figure 4a shows the basic operations that must occur in order for the packaged signal to be sent to the satellite 206

(page 22 lines 8-15; underscore added); and

Now, the CAP 246 may complete its process by electronically packaging the programs into groupings 280 for the signal transmission and adding the program control information to the packaged programs 282 to form a single signal for transmission. . .

Upon completion of the CAP's functions, the Operations Center 202 or the uplink site compresses 284, multiplexes 286, amplifies 288 and modulates 290 the signal for satellite transmission 292.

(page 25 line 18-26; underscored added).

As described in the specification, any source of video and audio programs may be combined with a program control signal into a packaged television program signal. The packaged program signal forms a single signal for transmission which may be compressed and modulated, transmitted to a cable headend, and forwarded, as is, to a subscriber location if the compression algorithm at the operations center is the same as the decompression algorithm at the subscriber's location. This process is further shown in figures 4a and 4b which illustrate the combining of the packaged programs in block 282 of figure 4b as the last stage of block 246 in figure 4a before compression 284, multiplexing 286, amplification 288, and modulation 290.

The claims 1 and 8 feature of a "single signal comprising a composite data stream" is further supported by original claims 64, 65, and 68 in U.S. Patent Application No. 07/991,074, from which the present application claims priority, and which is incorporated by reference. The claims are copied below.

64. An upgradeable system to provide a subscriber menu selection of video and audio programming from a plurality of individual menus, comprising: means for packaging video and audio programs; means for generating a program control information signal; means for combining: the packaged video and audio programs with the program control information signal into a combined signal; means for digitally compressing the combined signal into a digitally compressed signal; means for transmitting the digitally compressed signal to a terminal; terminal means for receiving and processing the digitally compressed signal comprising: means for generating individual menus; a port for coupling upgrade hardware; and at least one processor.

65. The upgradeable system of claim 64 wherein the port comprises at least a four pin connection for connecting an upgrade cable with four or more wires.

68. The upgradable system of claim 64, further comprising a hardware upgrade, coupled to the port of the terminal, comprising a decompressor and audio output.

These claims of the parent application further describe the combining of video programs, audio programs and a program control information signal into a combined signal that is compressed and transmitted.

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CONCLUSION

All issues having been addressed, Applicant respectfully submits that the instant application is in condition for allowance, and respectfully solicits prompt notification of the same. However, if for any reason the Examiner believes the application is not in condition for allowance or there are any questions, the Examiner is requested to contact the undersigned at (202) 824-3307.

Respectfully submitted,

BANNER & WITCOFF, LTD.

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By: /Michael S. Cuvillo/
Michael S. Cuvillo, Registration No. 59,255
1100 13th Street, N.W.
Washington, D.C. 20005
Tel: (202) 824-3160
Fax: (202) 824-3001